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# 14

## SECTION

# Fisheries and Water-Related Wildlife

## UTAH STATE WATER PLAN - WEBER RIVER BASIN PLAN

The value of maintaining adequate populations of fish and wildlife species can be measured in terms of preserving the ecological balance and, perhaps just as important, in terms of providing quality recreational opportunities.

### 14.1 Introduction

This section of the *Weber River Basin Plan* discusses the current and projected status, or quality, of fisheries, wildlife and related habitat. Discussions presented also include a number of recommendations to optimize the development and use of water resources in a manner that promotes the long-term well-being of fish and wildlife.

The Weber River Basin is the home of hundreds of miles of rivers and streams, eight major reservoirs, thousands of acres of wetlands and four major waterfowl management areas. As a result, there is truly an abundance of quality habitat for fish and water-related wildlife.

The value of fish and water-related wildlife is difficult to measure. Some studies have indicated that hunting, fishing and a number of other water-related outdoor activities contribute millions of dollars to the local economy. Economics, however, is not the full measure of value associated with fish and wildlife. Maintenance of existing fish and wildlife populations and related habitat is of equal importance.

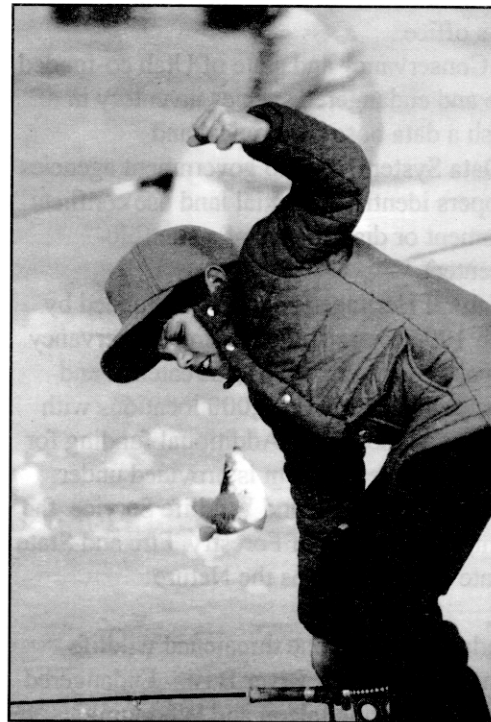
### 14.2 Setting

The Weber River Basin includes a variety of landscapes and habitat for fish and wildlife species common to northern Utah. The physical characteristics vary from high mountain valleys with cold winter months and high accumulations of snow to low-lying plains with relatively hot summer months and moderate precipitation.

### 14.2.1 Fish and Wildlife Species

Recent estimates indicate that 247 species of mammals, 46 species of reptiles, 13 species of amphibians, 436 species of birds and nearly 40 species of fish are found in the Weber River Basin. Of the total 782 species, nearly all require constant access to water-related environments.

Species of fish are categorized as warm or cold water and sport or non-sport. Figure 14-1 lists the warm and cold water sport fish and identifies reaches of streams, rivers and reservoirs where each



*Ice Fishing at Willard Reservoir*

species can be found. Birds species common to the Weber River Basin can be categorized into three basic groups: upland game birds, waterfowl and non-game birds. Several naturally occurring species of hunted game are in the basin.

Of primary interest, or concern, are fish and wildlife species categorized as "threatened and endangered." These species have been judged as in danger of extinction throughout all or a significant portion of its range. As such, threatened and endangered species are protected by federal and some state regulations. The Endangered Species Act (ESA) strictly prohibits any person or agency to "take" (killing or harassment) any federally listed threatened or endangered species.

The ESA does not directly apply to the operation of non-federal water projects or the development of water by non-federal organizations as long as the related operations and water development activities do not require federal permits. In general, owners and operators of non-federal water projects and facilities are not subjected to restrictions regarding the impact on fish and wildlife during the normal and ongoing operation of a given project. Exceptions to this rule include all activities that result in the "taking" of threatened and endangered species and certain limitations on development associated with the River Keeper Program developed by Weber County. Details regarding the River Keeper Program can be obtained from the Weber County Commissioner's office.

The Nature Conservancy and state of Utah co-funded a statewide rare and endangered species inventory in 1988 to establish a data base (Biological and Conservation Data System) to help government agencies and land developers identify potential land use conflicts prior to development or disturbance of a site (bio-diversity data center).

The Utah Natural Heritage Program was funded by the legislature in 1990 to assist the Nature Conservancy and the state identify sites sensitive to threatened and endangered species. To date, over 2,000 locations with rare species have been identified. Additional funding for the Utah Natural Heritage Program is provided under partnerships with the U.S. Fish and Wildlife Service, the State Arboretum, the Division of Forestry, Fire and State Lands and private entities such as the Nature Conservancy.

Only two endangered and one threatened wildlife species are found in the Weber River Basin. Endangered species include the Peregrine falcon and Whooping crane. The Bald eagle is the only threatened species of

the group. Candidates for official listing as either threatened or endangered species include the Mountain plover, Ogden Rocky Mountain snail and Spotted frog.

In addition to prohibiting the general "taking" of a threatened or endangered species, the ESA can require any individual, private organization or public agency involved in the development and use of water within a given drainage basin to implement a broad range of actions to mitigate any and all potential negative impact on a threatened or endangered species or any species considered as a candidate for threatened or endangered status.

In the event federal permits are required to develop a water source or make revisions to existing system operations, the Fish and Wildlife Service (FWS) will review the scope and overall intent of the proposed project or change in operations to assess the impact on fish and wildlife within the immediate area.

#### **14.2.2 Fisheries**

The Weber River Basin supports one full-time state operated fish hatchery located at Kamas that produces cold water sport fish stock for a number of reservoirs in and outside the basin boundaries. The basin also supports a number of rivers, streams and reservoirs that are considered prime fisheries for cold and warm water sport fish. Cold water sport fish include most species of trout and a few species of salmon. Warm water sport fish species include walleye, common species of perch, bass, crappie, blue gill, catfish and others. Locations of fish species are shown in Figure 14-1.

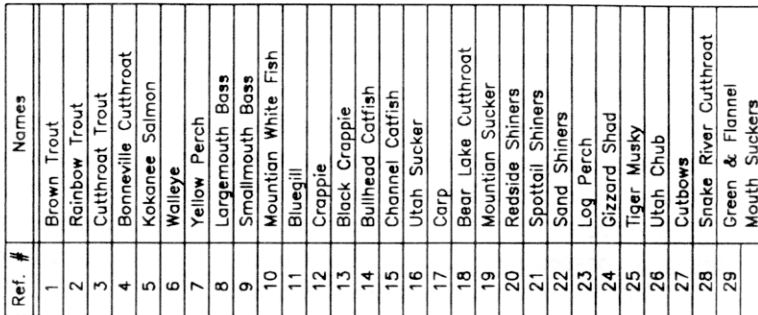
#### **14.2.3 Waterfowl Management Areas**

The Weber River Basin is noted for its exceptional waterfowl habitat, especially along the shores of the Great Salt Lake. To develop this resource to its fullest potential, four waterfowl management areas have been established within the marshes and wetlands along the shores of the Great Salt Lake from Plain City to West Bountiful. These areas are managed by the Division of Wildlife Resources and include Harold S. Crane, Howard Slough, Ogden Bay and Farmington Bay.

#### **14.2.4 Habitat**

The single most important factor in maintaining healthy and substantial populations of fish and wildlife is the condition of their environment or habitat. The overall habitat is influenced by the existing ecological system, level of domestic and commercial contamination and level of human intrusion.

## HABITAT LOCATIONS OF WARM WATER AND COLD WATER SPORT FISH



The natural climate, abundance of water and construction of water storage facilities have created exceptional habitat for a wide variety of fish and wildlife. However, the continued growth and resultant demand for water and land is in direct conflict with the needs of some fish and wildlife species.

The legislature passed *Title 73-3-3, Utah Code Annotated* in 1987 allowing the Division of Wildlife Resources to file for minimum instream flow rights for the preservation of fish species. The legislation further allows the division to file requests for permanent changes and use of an existing water right in order to preserve critical fish habitat and to generally provide for the permanent enhancement of the state's stream and river fisheries. Table 14-1 provides instream flow data.

Most of the state's fish and wildlife are protected by law. As a result, it is critical that planners and managers of water projects cooperate with fish and wildlife specialists to find workable solutions to fish and wildlife habitat problems. This could include the establishment of instream flows in rivers and streams, water rights for wetlands, and water quality standards in all fisheries.

### **14.3 Organizations and Regulations**

Several local, county, state and federal agencies are involved in fish and wildlife issues, laws, regulations and management of water-related facilities. These public agencies also work very closely with a number of private organizations to protect fish and wildlife and related habitat.

#### **14.3.1 Local**

Local agencies involved with the maintenance of fish and wildlife generally include a number of city and county agencies or subdivisions of water districts.

**Weber Basin Water Conservancy District-** The district's primary function is to provide water to agricultural, municipal and industrial water users. In so doing, the district also has the responsibility to operate and maintain major project water storage, distribution and treatment facilities.

By various agreements involving the Bureau of Reclamation, Division of Wildlife Resources, U.S. Fish and Wildlife Service and Ogden River Water Users Association, the district provides 1) instream flows within most reaches of both the Ogden and Weber rivers downstream of existing project reservoirs, 2) minimum annual diversions to the Ogden Bay Waterfowl Management Area, and 3) support efforts by state and

federal agencies to maintain acceptable levels of water quality in the reservoir fisheries.

By contract with the Bureau of Reclamation, the district is required to provide 60,500 acre-feet annually to the Ogden Bay Waterfowl Management Area. The diversion is made from the Weber River at the district's Slaterville diversion.

#### **14.3.2 State**

The state of Utah is home to an abundance of game and non-game species of fish and wildlife. The populations of all fish and wildlife are closely monitored and managed by the Division of Wildlife Resources. The division is legislatively charged with the responsibility to protect, propagate, manage, conserve and distribute protected wildlife throughout the state. The division prepares proclamations establishing annual fishing and hunting guidelines. The division is also responsible for the management of major state-funded waterfowl management areas. These areas include Harold S. Crane, Ogden Bay, Howard Slough and Farmington Bay waterfowl management areas in the Weber River Basin.

#### **14.3.3 Federal**

The completion of three federal reclamation projects have created or enhanced a number of exceptional fisheries in the Weber River Basin. In cooperation with several local water provider agencies, the Bureau of Reclamation has designed and constructed seven major reservoirs on the Ogden and Weber rivers that created warm and cold water sport fisheries. The operation of these reservoirs has also allowed for the maintenance of minimum instream flows that effectively enhance fish habitat within existing rivers and streams. These fisheries include Pineview, Causey, East Canyon, Lost Creek, and Echo reservoirs; Rockport Lake; and Willard Bay.

Federal fish and wildlife regulations are administered primarily by the U.S. Fish and Wildlife Service (FWS). However, the Bureau of Reclamation, in cooperation with local operation and maintenance agencies, is responsible for the condition and quality of fisheries within federally constructed reservoirs.

**Fish and Wildlife Service-** The Fish and Wildlife Service has responsibility for protecting and promoting federal interests in fish and wildlife issues, laws and regulations. The FWS's involvement in fish and wildlife issues is required under provisions given in the Fish and Wildlife Coordination Act (48 Stat. 401, as amended;

**Table 14-1  
MINIMUM INSTREAM FLOW REQUIREMENTS  
AND RIVER CLASSIFICATION INFORMATION**

Reservoir	River	Min. Flow (cfs)	River CLASS Above Res.	River CLASS Below Res.
Pineview	Ogden	8.0	V	I (6 mi.)
Rockport Lake	Weber	25.0	II	II (10 mi.)
East Canyon	East Canyon	5.0	III	II (10 mi.)
Echo	Weber	0.0	II	II (15 mi.)
Lost Creek	Lost Creek	8.0	III	II (12 mi.)
Causey	S. Fk. Ogden	25.0	III	I (7 mi.)
Smith and Morehouse	Morehouse Creek	5.0		
<p><b>Table Notes</b></p> <ul style="list-style-type: none"> <li>• River Class above Res./River Class below Res.: Stream classification above and below the indicated reservoir as determined by the Utah Division of Water Quality.</li> <li>• Mileage given for river classification below the indicated reservoir indicates the distance of the classification to the next reservoir or point of confluence with another stream or river.</li> <li>• Echo had no minimum instream flow requirement due to its early date of construction.</li> </ul>				

16; U.S.C. 661 et. seq.). The act requires consultation with the FWS and the wildlife agency of any state wherein the water of any stream or other water body are proposed or anticipated to be impounded, dewatered, channelized, or otherwise controlled or modified by any public or private entity.

In the Weber River Basin, the FWS has conducted a number of investigations under the authority of the Fish and Wildlife Coordination Act. The FWS investigations have primarily been associated with facilities designed and constructed by the Bureau of Reclamation, miscellaneous power projects that require a permit from the Federal Energy Regulatory Commission and work in wetlands that requires a permit from the Army Corps of Engineers or the Environmental Protection Agency.

The FWS is also responsible for the administration of the federal Threatened and Endangered Species Act. All activity that potentially threatens or endangers a protected fish or wildlife species is investigated (assessed) by the FWS. The indicated activity can include the construction, operation and maintenance of water development facilities.

**Bureau of Reclamation-**The Bureau of Reclamation acts in cooperation with other local, state and federal agencies to actively promote the development of fish and wildlife recreational opportunities at all reservoirs originally designed and constructed under

federal reclamation law. Seven of the eight major reservoirs were designed and constructed through federal water reclamation acts.

Willard Reservoir, an off-steam storage facility on the lower Weber River system, is considered a warm water fishery with populations of blue gill, black crappie, catfish, carp, northern pike and some species of bass. Other bureau reservoirs, including East Canyon, Lost Creek, Wanship, Pineview and Causey, are considered cold water fisheries and support most species of trout native to Utah waters.

To promote sport fishing and to optimize recreational opportunities, the Bureau of Reclamation has completed a facility management plan for Lost Creek Dam and Reservoir. The plan addresses a number of issues relating to the use and operation of the reservoir by outdoor recreationists. Significant issues include the lack of adequate roads to access boat ramps, fish cleaning facilities, camping and picnic areas, the establishment of boundaries or buffer zones between existing and proposed recreational areas and private land surrounding the reservoir, excessive visitor traffic and congestion, water quality within the reservoir, and the maintenance of adequate fish populations for existing and proposed fishing activity.



## 14.4 Problems and Needs

The current and potential degradation of water quality in the upper Weber and Ogden rivers has posed a threat to stream and reservoir fisheries. The measured and potential decline of surface and groundwater quality in these areas has been shown to be the product of agricultural runoff and domestic wastewater flow from local residential and commercial developments. The increase in effluent nutrients comes from residential septic tanks, irrigation runoff from agricultural land and effluent from municipal wastewater treatment facilities. This has threatened or created a limited degree of eutrophication in local reservoirs.

Two areas where the water quality is of concern to the fisheries and which can become more of a problem as population growth and recreational activities increase are Pineview Reservoir and the East Canyon and Silver Creek drainages. More information is given in Section 12, Water Quality.

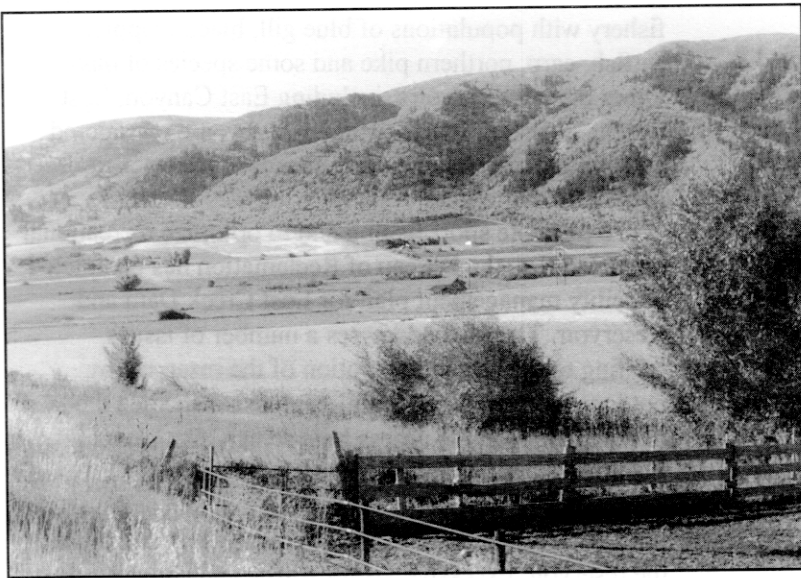
## 14.5 Alternative Solutions or Actions

Pineview Reservoir supports a large number of warm and cold water sport fish species and a considerable level of fishing activity by anglers throughout the northern Utah area. The fishery, however, is potentially threatened by the continued use of domestic septic tank waste disposal systems within the upper Ogden River drainage.

Water quality problems currently associated with the East Canyon drainage have been addressed by the Division of Water Quality. The division's recently completed *Water Quality Management Plan* presents several recommendations to improve on existing water quality in East Canyon Reservoir and Creek. These recommendations include the implementation of additional (tertiary) treatment at the existing wastewater treatment facility currently owned and operated by the Snyderville Basin Sewer Improvement District.

## 14.6 Issues and Recommendations

The significant fish and wildlife related issues in the Weber River Basin generally center around the decline of water quality within existing reservoir fisheries. Of particular importance is Pineview and East Canyon reservoirs and East Canyon Creek. These issues are extremely important to the overall well being of the upper basin fisheries. The subject of water quality is discussed in Section 12, Water Quality. The reader is referred to this section for additional information regarding water quality issues in this and other areas of the basin. ❖



*At Pineview Reservoir*